

Claims

What is claimed is:

1. A passive stylus system for providing input to an electronic appliance, wherein the passive stylus utilizes a permanent magnet to provide location information to a magnetic sensor system, said passive stylus comprising:

a passive stylus including at least one permanent magnet;

a magnetic sensor system for detecting a location of the at least one permanent magnet disposed within the passive stylus, wherein the magnetic sensor system further comprises a plurality of magnetic sensors that are capable of (1) detecting the at least one permanent magnet, (2) determining a location of the at least one permanent magnet relative to a reference point, and (3) transmitting the location of the at least one permanent magnet; and

a display system, wherein the display system utilizes the location of the at least one permanent magnet to display data on the display system that represents movement of the passive stylus within a field of operation.

2. The passive stylus system as defined in claim 1 wherein the magnetic sensor system further comprises at least two magnetic sensors that provide x and y coordinate information.

3. The passive stylus system as defined in claim 2 wherein the system further comprises utilizing a circular triangulation formula for determining a location of the passive stylus, wherein data from the at least two magnetic sensors is utilized in the circular triangulation formula to reduce inaccuracies in passive stylus position determination due to inclination or movement of the passive stylus.

4. The passive stylus system as defined in claim 3 wherein the passive stylus further comprises:

a stylus body for housing components of the passive stylus;

an ink cartridge;

an actuator disposed on a non-inking end of the ink cartridge;

at least one position magnet disposed adjacent to an

inking end of the ink cartridge, having a hole through which the ink cartridge is disposed;

a spring disposed around the ink cartridge, and between the at least one position magnet and a stylus tip;

a trigger magnet disposed above a non-inking end of the ink cartridge, and having a hole through which the actuator can pass;

a ferrous washer disposed above the trigger magnet, the ferrous washer having an outer shelf and an inner conical depression in a surface thereof;

a signaling magnet disposed at rest so as to be inclined, a bottom surface disposed at least partially at rest against the inner conical depression, wherein the ink cartridge will push the signaling magnet from an inclined position to an upright position so that the bottom surface of the signaling magnet is at least partially at rest against the outer shelf.

5. A method for providing input to an electronic appliance utilizing a stylus system that incorporates a permanent magnet, said method comprising the steps of:

(1) providing a stylus body having a permanent magnet

associated therewith, and a magnetic sensor system;

(2) detecting the permanent magnet utilizing the magnetic sensor system;

(3) determining a location of the permanent magnet relative to a reference point; and

(4) transmitting the location of the permanent magnet in the stylus body.

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